
EWA Status Report

Presented at the Quinn/Spear
meeting
July 19, 1999



Outline

- Review Of Games
- Evaluation of Games
 - Fish: Delta Smelt, Salmon, Splittail
 - Water Supply
 - Water Quality
- Issues for Technical Teams
- Implementation Issues
- Next Games



Games Completed

Game	Stage 1	Account	Baseline
1	Middle	G/G	Accord + Upstream and in-Delta AFRP
2	End	G/G	Accord + Upstream and in-Delta AFRP
3	End	Credit	Accord + Upstream and in-Delta AFRP
4	Start	G/G	Accord + Upstream and in-Delta AFRP
5	Start	G/G	Accord + Upstream No in-Delta AFRP



Proposed Games

Game	Stage 1	Years	Baseline
6	End	91-95	Accord + Upstream AFRP Water Users Game
7	Start	99-00	Accord + Upstream and in-Delta AFRP
8	End	81-95	Accord + Upstream and in-Delta AFRP
9...?	Start	81-95	Negotiations



Game 6

- 10,300 cfs Banks + JPOD
- GW: Semitropic, Gravelly Ford, Kern, 200 TAF each
- In-Delta Storage: Webb, Bacon-Victoria-Woodward with connection
- Unlimited water purchase
- Vary In-Delta AFRP
- Vary E/I
- Vary X2 when outflow below 20,000 cfs
- EWA runs projects: Biological decisions made by consensus of agencies/stakeholders: final decision by agencies



Game 2- \$30M/yr -\$150M

Location	TAF	Options	\$
NOD	\$45/500	\$5M	50
SOD	\$45/500	\$5M	50
Spot	100		20
GW pumping	120 out 240 in		30



Game 4- \$40M/yr -\$120M

Location	TAF	Options	10-year lease
NOD	\$27/110	\$15M	\$45/150
SOD	\$27/230		
Spot	100		13
GW pumping	0		



Early Stage 1 Assets Games 4 & 5

- South Delta Program - 8,500 cfs, Temporary barriers in.
- JPOD
- EI, In-Delta AFRP Variances
- Ground Water (400 TAF; 40 TAF/Mo. in-out)
- Shasta Enlargement (50 TAF)
- Water Purchase (NOD, SOD, spot market) -- \$40m/yr.
- San Luis Storage Borrowing
- Unused System Capacities
- Demand Shifting (100 TAF/yr)



Late Stage 1 Assets

Game 2

- Expanded Banks - 10,300 cfs
- JPOD
- E/I, In-Delta AFRP Variances
- Ground Water (600 TAF; 60 TAF/Mo. in-out)
- Shasta Enlargement (50 TAF)
- Webb Tract Storage (120 TAF, 2,000 cfs. in-out)
- Bacon+ Storage/Connected (200 TAF, 4,000 cfs in; 2,000 cfs. out)
- ET Reductions on Delta Islands (60TAF / year)
- Water Purchase (NOD, SOD, spot market) -- \$30m/yr.
- San Luis Storage Borrowing
- Unused System Capacities
- Demand Shifting (100 TAF/yr)



Water Quality

Conclusions

- Parameters: Bromide, Chloride, TDS, Organic Carbon
- Objectives/indices:
 - Measured as progress towards WQ goals
 - Stage 1 WQ targets are already met in some periods
- Salinity assessment
 - Initial use of asset in game (\$10M/YR), Increased outflow in fall
 - Tradeoff: reduce worst salinity spikes by about 50mg/l (Cl), 100mg/l (TDS) for 2-3 months
 - Issues: Efficient? Quality-supply tradeoff in repeating critical years, competition for transfers?



Water Quality Conclusions (Con't)

- Organic carbon at South Delta intakes:
 - Avoid seasonal peak: time drainage and/or adjust export operations
 - Export shift (in time) related to EWA operation: reduce DOC (about -5%)
 - Increase due to in-Delta storage: estimates depend on assumptions (about +5%)
 - Current analysis crude: CALFED could link with more thorough CUWA/DW/ USBR study



Water Quality Conclusions (Con't)

- Tradeoffs:
 - Shifting pumping from Feb-Mar to summer and fall will improve DOC of exports
 - In drier years this operation could increase export salinity.
 - In wetter years this operation may actually improve salinity



Essential EWA Assets

- A monetary account for water purchases
 - \$40M to \$50M at start of Stage 1- \$20M to \$30M at end of Stage 1
- Ability to purchase and transfer water at a reasonable cost and at needed times
 - Up to 100 TAF Sacramento River System
 - Up to 150 TAF San Joaquin River System
 - Up to 250 TAF in Export Areas
- Ability to Vary Standards
- Adequately screened project water diversion intakes in south Delta
- JPOD with no State and federal sublimits



Essential EWA Assets (con't)

- Access to storage upstream and south of Delta and Delta Islands
 - Utilize available storage in existing reservoirs; **San Luis is key** with other SWP and CVP storage.
 - Late in Stage 1 need storage closer to export pumps for flexibility. Wedd Tract and Bacon/others Islands with a direct connection to bacon and CCF
- Increased permitted export capacity
 - Increased Banks 8,500 cfs pumping window In early Stage 1.
 - Expand Banks permitted capacity to 10,300 cfs by end of Stage 1
- Access groundwater
 - At least 600 TAF in SOD area.
 - Facilities to increase recharge and extraction rates

